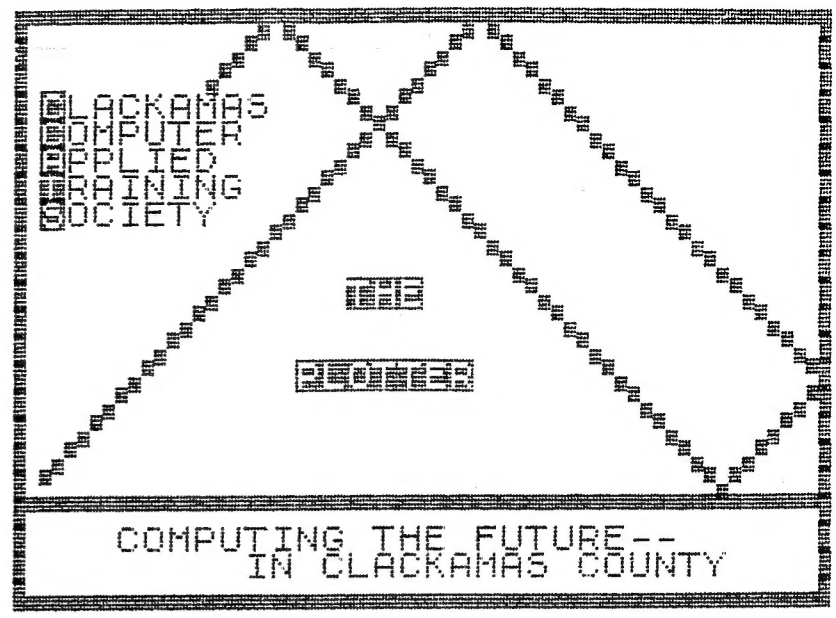
>>>>>>>>><<<<<<<<<

THE PLOTTER

CLACKAMAS COMPUTER APPLIED
TRAINING SOCIETY
NEWS LETTER
****
VOLUME 11 ** NUMBER 10

******
OCTOBER 1993



EDITED BY: DICK WAGNER
CHAIRMAN: JACK ARMSTRONG
V/CHAIRMAN: BILL DUNLOP
SECRETARY: DICK WAGNER
TREASURER: ROD GOWEN
PR OFFICER: BOB EVANS
LIBRARIANS: BILL DUNLOP
ALICE DUNLOP

MEETING

The OCTOBER meeting will be:

on: SUN., OCTOBER 17 1993

MEETING open at: 1:00 P.M.
in: COMMUNITY ROOM
FAR WEST FEDERAL BANK
OREGON CITY SHOPPING CENTER

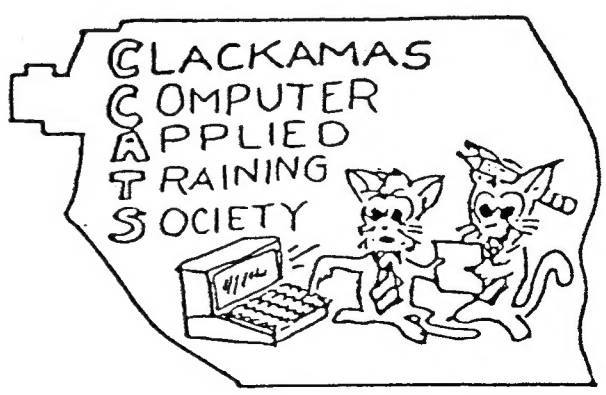
WHAT YOU WILL FIND IN THIS ISSUE:

FROM THE EDITOR'S DESK

I am sorry to note that this issue is quite devoid of 2068 programs and articles. The nearest we come to a 2068 program is the article on printer codes which includes a program conversion from GW-BASIC. While the article pertains to a particular printer, the concept of displaying whatever graphic symbols your printer may possess is still valid. This article really illustrates a major change in printer commands, and that Epson commands are not necessarily fixed for ever.

Hopefully, one of our issues will have a review of some CAD programs available on the market plus some available thru shareware. A CAD program is a computer aided drawing program. My son uses TURBOCAD with great dexterity while I can do a little on some shareware programs and on KEYCAD. This is something to work on for the future. Maybe I can get several of our members to try their hand at this interesting method of drawing.

>> >>



Continued from page 1
I probably should do a review of SOFTWARE LABS catalog of many, many shareware programs. Obviously they don't include all there are out there as some would be of questionable value, or perhaps they are poorly programmed. RMG Enterprises has a long list of shareware programs. No doubt some are identical to SOFTWARE LABS'. There are very good color pictures in this catalog plus good program descriptions. If Rod has some of the described programs it would be wise to get a copy from him at some savings in cost.

One thing that irks me about some shareware programs is the lack of information for copying the manuals. Some I have print full 80 columns, or close to it so there is no border for punching the hard copy for 3 ring binders. When I add a left column by setting up the printer by using GW-BASIC, the end of line command in the program throws in double lines for almost each line. I am one of those persons who does not do well with just reading the information on the screen. I need hard copy to mull over.

One program I have prints the monthly calendar in various languages. So, expect to see the month's calendar page in a different language now and then. If there is space this time I will put one in. Not being a multilinguist, I don't have much use for this kind of a calendar but maybe some of our readers will like this.

I have a favorite used book-magazine store that I try and stop at every time I take my wife to the coast. Now and then I find an old magazine with GW-BASIC (Popular Computing calls it Microsoft BASIC) programs. This magazine has a column called "Recreational Computing". This includes story, puzzle, graphics, etc. I'll try my hand at Sinclair BASIC conversion on a few of these.

BITS & BYTES

by: Rod Gowen

In this column I try to bring you the latest and complete information and news available to me regarding the world of TS computing. One way that I can accomplish this is if I have the support of you, the reader, in collecting news that may be of interest to other readers. If you have any news, rumors or other tidbits of information that fits this description, why not send it along? We will be watching!

OUR SEPTEMBER MEETING---

was probably the best one we've had in quite some months. We had 5 people in attendence and had a short business meeting to discuss future plans for the club. We had a consensus on plans for getting back to a format of discussion, show and tell and question/answer sessions. If this is why you are in the group, you will be pleased to know that we hope to get back to these things just as soon as possible. The project that has taken us off the regular path is just about finished and we would like to see more members in attendance. Noe of the things listed above will work if we can't get more than 3-4 people to show up for meetings. BRING YOUR QUESTIONS! BRING YOUR PROBLEMS! BRING YOUR SUCCESSES! We want to hear about them. Some of our members know a lot more than others and some members feel that others are talking "over their heads" and seemingly are afraid to ask questions. I can only repeat the old saying "There's no such thing as a stupid queston, only stupid people". ASK!! We will do our best to answer and help with any problems you may be having with your computer or program. If there is something that you think we would like to see demonstrated, feel free to bring it up as a topic suggestion.

OUR LIBRARY---

can also be of great help. We do have a very extensive library of books, magazines, newsletters and software. It is available to all paid members as a resource. In addition to the official CCATS

library, RMG has available for meeting viewing, a wide selection of videos on various computer subjects from DOS to Windos, from Paradox to WordPerfect and much, much more. If there is a subject that is of general interest to the group, the video could be shown at a future meeting.

TREASURY NOTE-------

Our group account has been moved from Washington Mutual to West One Bank. The balance was noted at the September mmeting and we will have enough to finish out the year. We have 3 more issues of THE PLOTTER to put out this year. Other than that, we can make our first run of the book when it is ready. With the reduction in the number of newsletters that we are exchanging with, we should be able ot cut our dues back to at least $15 for 1994. This will be discussed at our next meeting.

OCTOBER MEETING DATE--

Our October meeting will take place on October 17, 1993 at 1:00 PM until 4:00 PM in the community room of Far West Bank in the Oregon City Shopping Center. Hope to see you there! Bring a computer friend, no matter what computer they may use!

That's it for now!

See you next time. . .

HOT Z SPECTRUM

An Old friend of the TS community phoned me yesterday and asked if I had heard of a version of HOT Z for the Spectrum. He has been tracking rumors of such an animal for quite a while and has not been able to locate a copy. I am sure that he would appreciate it if someone out there would either prove the existence of it or lay the rumors to rest once and for all. If you know of this program or of someone who might be able to help us locate it, PLEASE, drop me a line here at THE PLOTTER and I will pass the info on.

Thanks, Rod Gowen

DID YOU KNOW?

The following is the reprint of a letter in the Popular Computing Magazine of April 1985.

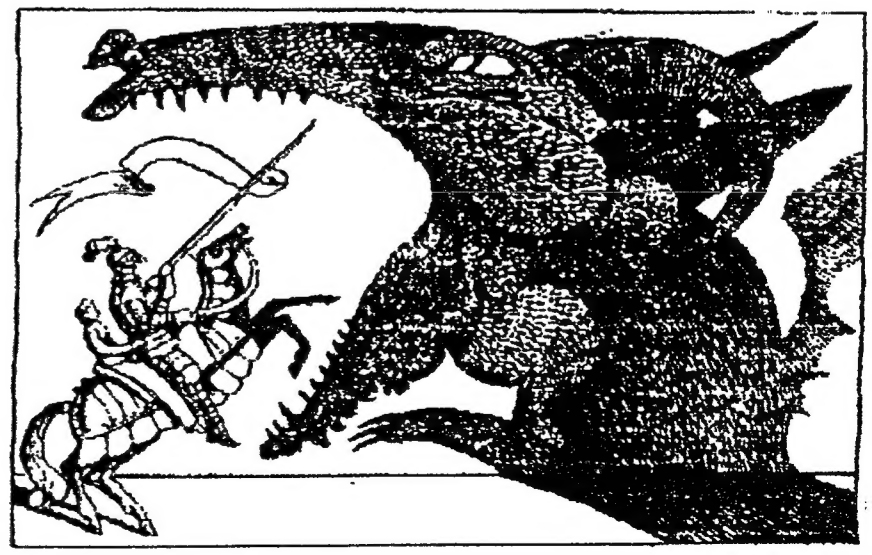
Dear Editor:

In A. Richard Immel's article "The Unpicked Apple" he states that after Chairman Steven Jobs was not picked to run the Lisa project at Apple Computer "a miffed Jobs regrouped and then started a project that would be all his own: a Lisa-like computer--later to be called Macintosh--that was aimed more at the consumer market".

This is not the case. Jobs did not create the Macintosh project. In fact, he actively opposed it until the crew that I put together had demonstrated its power and potential. It was not named "later". I named it "Macintosh" from the very beginning, since the apple of that name is my favorite variety. I changed the spelling of the name to avoid some trade name conflicts.

I created the Macintosh project so that Apple would have a relatively low-priced machine in the new generation of bit-mapped, high-technology computers.

Signed
Jef Raskin
Cupertino, CA



SCANNER COPY OF A SKETCH, 1:1

RMG UPDATE NEWS FOR OCTOBER 1993

VOLUME 5 NUMBER 10

** RMG NEWS **

RETURN GOODS POLICY CHANGE-EFFECTIVE OCTOBER 1, 1993, RMG will be rigidly enforcing a new product return policy. If you are a regular RMG purchaser, please read this carefully as it will affect future orders. The policy will be:

IF YOU PURCHASE NEW ITEM(S) AND THEY'RE NOT WHAT YOU EXPECTED OR WILL NOT WORK WITH YOUR TYPE OF COMPUTER, WE WILL ONLY TAKE THEM BACK IF YOU CALL FOR RETURN AUTHORIZATION FIRST! FURTHERMORE, IF THE ITEM(S) ARE NOT IN ORIGINAL BOXES/PACKING MATERIALS THERE WILL BE A 50% RESTOCKING FEE AS THESE ITEMS CANNOT BE SOLD AS NEW AGAIN. IF ITEM(S) ARE IN THE ORIGINAL BOXES/PACKING MATERIALS, THE RESTOCKING FEE IS 25%. IF ITEM(S) ARE NOT WORKING AS WHEN SHIPPED TO THE CUSTOMER FROM RMG WHEN THEY ARE RECEIVED BACK, THERE WILL BE *NO* REFUND! THE ITEM(S) IN THIS CASE WILL BE SHIPPED BACK TO THE CUSTOMER AS-IS.

This change in policy is necessitated by a couple of things. First, shipping rates continue to climb and we've not raised our shipping charges as often as UPS has raised ours. Second, and more importantly, we have had a couple of customers order things from our flyers/catalog without first checking with us to see if it would operate with their type of computer. We are not only a T/S dealer, in order to stay here for you die-hard TSers, we have had to branch out into the PC/IBM clone market and therefor carry a lot of items for IBM that will NOT work on a TS computer and a lot of items for TS computers that will NOT work on an IBM clone machine. PLEASE, PLEASE CHECK IF YOU ARE NOT SURE! It could save you some money and will definitely save a lot of possible aggravation on both sides. The bad thing about returned items that are not in the original boxes and/or the original packing materials (foam/plastic bags, etc.) is that the item can no longer be sold as "new". This is why we will go to the new 50% restocking fee on items returned this way. If the items are in good working order and in the original box with all original packing materials the restocking fee will remain our normal 25%. If the item is actually defective and you call for a return authorization, we will not charge any fee and will ship out another item, either the same or of equal value unless we are not able, in which case you will receive a complete refund for the item. No refunds of shipping charges, of course.

We are still waiting for Jack Dohany to ship the eprom ROMS that we ordered for some of our customers last October. If you are one of those who sent money in to us for one of these dual ROMs, please be patient. If we do not see them by the end of September, we are going to issue refund checks.

We hope to have our "End of the Year" sale ready by next time. We hope that there will be something on it that will be of interest to you. Don't put off ordering something that interests you from the CNSN (consignment) pages as there will be no sales on these items. The sale will be on new and used RMG stock only.

KEEP WATCHIN' FOR MORE NEWS!

Rod Gowen, Owner, RMG Enterprises
14784 South Quail Grove Circle, Oregon City, OR 97045
503/655-7484 8AM-6PM PT * FAX/VOICEMAIL: 503/655-4116 24 HRS

PRINTER GRAPHIC CHARACTERS

Dick Wagner

This article pertains to Epson 24 pin printers, mainly the LQ-570 model & its counterpart Epson Action 5000. As far as I could learn they are identical printers, the LQ-570 being sold thru computer and printer stores while the Action 5000 is intended to be sold by outlets such as department stores, electronic supermarkets, etc. I don't know if the manuals are identical, perhaps the Action 5000 manual is not on so sophisticated terms.

The system used by these printers is Epson ESC/P2. There was a prior system called ESC/P. Epson calls the ESC/2 an ESC/P2 level. The reference guide (not the manual that came with the printer) for the ESC/P2 mentions these levels as "---differs between ESC/P2 and former ESC/P levels." This user manual also makes use of the term "Non-ESC/P2 printers". As the reference manual is for Epson 24 pin printers, there seem to be various levels of development of the operating systems much as computer programs have version numbers. I wonder if other 24 pin printers have been able to duplicate the ESC/2 operation.

The reason for bringing up this information is that the ESC/P2 uses some commands not available to the ESC/P level, and the addition of "(" plus a character in place of a single character in some commands. There are 9 such combinations. There are 69 commands at the ESC/P2 level while 27 commands from the ESC/P level have been deleted or changed so they are not carried over to the ESC/P2 level. For these reasons there may be only a few users of the ESC/P2 system who can relate by experience to the following. I hope it is of interest anyway.

While many dot matrix printers have a few graphic characters below codes 32, the ESC/P2 level has 31 characters as shown below. My Panasonic 8 pin printer can print the 3rd-6th Codes as characters. The ESC/P2 also has a character for code 127, which is an upward solid triangle. The printer requires the ESC(^nn command for each character code to be printed.

The following program prints 30 graphic characters below codes 128, codes 1-31, and code 127. These special characters are from a printer character table peculiar to the ESC/P2 system. The printer manual shows 6 tables of 256 characters each but none of the characters below 32 show on these tables. Oddly, 5 of the 6 character tables shown in the reference guide show characters below code 32 while the user guide that came with the printer show all of those characters deleted. The special character table takes the place of character tables.

The ability to define a specific character and print it means that the printer commands that change a character, such as double wide, are also applicable. For example, character code 14 is printer double wide. By entering ESC 14, the printer is set for double wide printing. By using the ESC(^nn command, Code 14 will print a black rectangle

>> >>

with a white circle in it, double wide.

A few words about this program:
The user manual shows the graphic character command as ESC(^nn. This is interpreted as ESC(^n1n2 data, where n1 is a number less than 256 and n2 is increments of 256, all of this defining the amount of data being sent to the printer. In the program, line 50 includes ESC (27), ((40), ^ (94), 32 charactersto be printed, 1-31 & 127, n1 does not exceed 256 so n2 is 0, and data is for the codes of each character. As ESC(^n1n2 data pertains only to the special character code table it would be most unusual for n1 to exceed 256, in most cases only 1 would be used. An example would be the use of code 1 with this table, printing a smiling white face.

How to use this kind of a command? It can be used with LPRINT in a program in BASIC, such as in a game. It seems difficult to define this command in many word processors, but good old MSCRIPT v.5 can make use of this command in 2 different ways. If a character is to be used often then the symbol shift G and 2 letters can be asigned for memory storage. The easiest way is to assign numbers 0-9 numbers, using 6 digits, one for each number of the command, and use symbol shift G and the defining number for each part of the command.

The following program is in GW-BASIC but 2068 users need to make only a few changes. All "+" characters should be ";", and lines 50 and 60 need the "'", which stands for REM, changed to "REM".

As this program was somewhat of a test of the printing, CHR$ were used for the DATA. A loop and READ-DATA would be easier.

EPSON LQ-570 characters available with ESC (^ command
These characters are not on the regular 6 character tables
provided with this printer

☺☻♥♦♣♠•◘○◙♂♀♪♫☼►◄↕‼¶§▬↨↑↓→←∟↔▲

```
10 LPRINT "EPSON LQ-570 characters available with ESC (^ command"
20 LPRINT "These characters are not on the regular 6 character tables"
30 LPRINT "provided with this printer"
40 LPRINT: LPRINT
50 'line 50: ESC=27, (=40, ^=94, number of characters=32, 0=carry over*256
60 'lines 80-150 are codes of the characters 1-32 and 127
70 LPRINT CHR$(27)+CHR$(40)+CHR$(94)+CHR$(32)+CHR$(0);
80 LPRINT CHR$(1)+CHR$(2)+CHR$(3)+CHR$(4)+CHR$(5)+CHR$(6)+CHR$(7);
90 LPRINT CHR$(8)+CHR$(9)+CHR$(10);
100 LPRINT CHR$(11)+CHR$(12)+CHR$(13)+CHR$(14);
110 LPRINT CHR$(15)+CHR$(16)+CHR$(17);
120 LPRINT CHR$(18)+CHR$(19)+CHR$(20);
130 LPRINT CHR$(21)+CHR$(22)+CHR$(23)+CHR$(24);
140 LPRINT CHR$(25)+CHR$(26)+CHR$(27)+CHR$(28)+CHR$(29)+CHR$(30)+CHR$(31);
150 LPRINT CHR$(127)
9999 SAVE"B:grafcd.bas"
```

DESIGN A ZERNER DIODE CIRCUIT

Dick F. Wagner

The companion program for the 2068 computer was in the last edition. It was developed from the GWBASIC circuit given here. This program designs a zener circuit to provide a stable DC output from a higher DC voltage.

The circuit is simply a dropping resistor and the zener diode, with connections for the input, the output, and ground.

You input the minimum DC voltage of the source, the maximum DC voltage of the source, the minimum and maximum load currents, and the desired zener controlled output voltage.

The program gives the value of the series resistor, its wattage rating, and the zener diode minimum watts rating for the required voltage output.

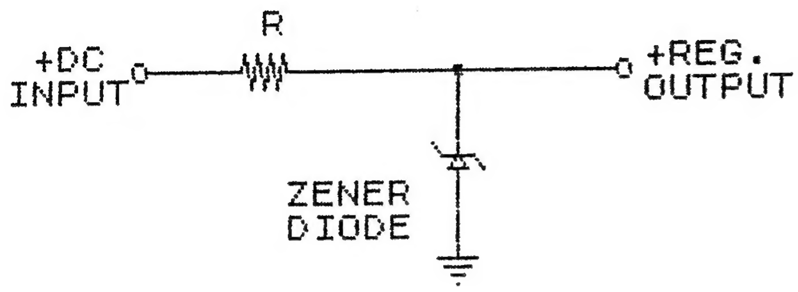
A test run is displayed for operating a tape recorder from an auto 12 volt system.

```
ZENER DIODE VOLTAGE REGULATOR DESIGN

MINIMUM DC INPUT VOLTAGE ? 11.5
MAXIMUM DC INPUT VOLTAGE ? 13.5
MINIMUM LOAD CURRENT (IN MA) ? 10
MAXIMUM LOAD CURRENT (IN MA) ? 200
ZENER DIODE VOLTAGE ? 6.1

REQUIRED SERIES RESISTANCE = 24.5 OHMS
MINIMUM ZENER DIODE RATING =  1.78 WATTS
MINIMUM WATTS RATING OF R=  1.48
MINIMUM ZENER DIODE RATING WITH NO LOAD = 1.34  WATTS
ANOTHER CALCULATION? (Y OR N) ?
```

```
10 SCREEN 2
20 CLS:PRINT "ZENER DIODE VOLTAGE REGULATOR DESIGN"
30 PRINT: INPUT"MINIMUM DC INPUT VOLTAGE ";V1
35 INPUT"MAXIMUM DC INPUT VOLTAGE ";V2
40 INPUT "MINIMUM LOAD CURRENT (IN MA) ";I1
50 INPUT "MAXIMUM LOAD CURRENT (IN MA) ";I2
60 I1=I1*.001: I2=I2*.001
70 INPUT "ZENER DIODE VOLTAGE ";VZ
80 R=(V1-VZ)/(1.1*I2)
90 P=VZ*(((V2-VZ)/R)-I1)
100 R=INT(R*10+.5)/10:P=INT(P*100+.5)/100
110 PRINT: PRINT"REQUIRED SERIES RESISTANCE =";R;"OHMS"
120 PRINT "MINIMUM ZENER DIODE RATING = ";P;"WATTS"
130 PRINT "MINIMUM WATTS RATING OF R= ";: PRINT (V2-VZ)*I2
150 Z=VZ*((V1-VZ)/R): Z=INT(Z*100+.5)/100
160 PRINT "MINIMUM ZENER DIODE RATING WITH NO LOAD =";Z;" WATTS"
170 PRINT "ANOTHER CALCULATION? (Y OR N) ";:INPUT A$: IF A$="Y" THEN 20
180 IF A$+"N" THEN 190
190 PRINT:END
```

>> >>

ZENER DIODE VOLTAGE REGULATOR



—NOTICE—

Opinions expressed in articles are not necessarily those of members of the Clackamas Computer Applied Training Society . Meeting minutes carry the consensus of members present at meeting. This newsletter nor staff will not be held liable for any damage or consequences due to following instructions, or review of products as contained in this newsletter

SUBSCRIPTION RATES

FREE SUBSCRIPTION WITH PAID CCATS MEMBERSHIP-$20.00/YR

PLACE YOUR AD HERE

AD RATES

****

1 FOUR LINE CLASSIFIED FREE WITH MEMBERSHIP

$ .50 / LINE
$ 5.00 / 1/4 PAGE
$ 8.00 / 1/2 PAGE
$ 15.00 / FULL PAGE

ALL AD COPY MUST BE IN BY THE 10TH OF THE MONTH PRIOR TO THE MONTH AD IS TO RUN.

CCATS
14784 S. Quail Grove Circle
Oregon City, OR 97045

EXPIRES: 12/93
HOWARD CHEGWIDDEN
2 STEPHEN ST.
DOVER, NJ 07801
ML/PD:12/93